

is little better than when first injured. Can extend and flex left wrist a little, uses the pectorals slightly better. Cannot rise shoulder at all or move it backwards; no use whatever of biceps, triceps or supinator longus. Can almost open the hand and nearly close it, extend the thumb but not flex it.

Leg. The peroneal group weak. Quadriceps slightly weak. Patient describes the leg as strong but slow. No atrophy. No analgesia or anesthesia. Reflexes equal on both sides, fairly lively. No involvement of cranial nerves. Wound in head began to heal well a week ago. All the burns are deep and sharply defined.

### CONTACT WITH STILL HIGHER TENSION CURRENT.

(Notes of two accidents with similar results given me by manager of a power transmission line.)

Our transmission system amounting to over 300 miles of line carries a pressure of 50,000 volts between lines and about 29,000 volts between any one line and ground. It is an alternating current of 60 cycles. A party of three men, one a man about 50 and his son about 18 years old, and an engineer were surveying a parcel of ground which extended under our power line. They were using a metal tape which is commonly known as a surveyor's chain 650 ft. long. The elderly man held one end and the son and engineer the other. The elderly man carried the zero end of the chain ahead of the party to the next stake in the line of their measurement. This course led him under the power line at nearly right angles to it, and beyond a considerable distance. The character of the ground was such that when he reached the stake from which the measurement was to be taken, he had passed out of sight of the power line and in his interest in the work in hand I think it is doubtful if he had in mind the existence of the power line in that particular neighborhood. When he arrived at the stake the engineer and the boy pulled the tape back in their endeavor to pull it taut and to make the proper measurements. The steel tape must have caught on a piece of sage brush and when they gave it a jerk to free it, the tape flipped up and came in momentary contact with one of the wires of our power line. All three parties at that time had hold of the tape and instantly came in circuit between the line and the ground and were subjected to the voltage between the line and the ground. This particular line was protected by an automatic circuit breaker at its junction with the main line. This circuit breaker tripped out when the accident happened, hence there was only a fraction of a second after the tape came in contact with the line that the line was alive.

However, before the line tripped out, sufficient time elapsed to give all three of the men quite severe burns. The engineer and the boy were unconscious for about 10 minutes as far as they could judge, but upon regaining consciousness were able to pick themselves up and go to the assistance of the old man. Fortunately for these men the ground in this vicinity was very dry and formed a very poor grounding. Their recollections of being in the circuit were not clear, and it is doubtful if they had any realization of what hit them. The condition of the older man was much more serious than that of the two younger men, but he states that he did not lose consciousness and that his impression was that he was in the midst of a ball of fire and that fire was all about him and that he heard a great roar. The current passed through or over his body causing him to fall sidewise and it was found he had a severe burn on his side just above the hip. The shock

paralyzed his arms and lower limbs for 2 or 3 weeks. The accident occurred in the latter part of August and the sun was shining very hotly at the time, and he suffered greatly, not from the pain caused by the burns but from the intense heat of the sun. He did not lose consciousness while he lay on the ground and was able by moving his shoulders and head to twist himself around in such a position that his head was brought in the shade of a bunch of sagebrush which gave him some protection from the sun.

The engineer did not realize that he was burned and walked around for three or four days before he was forced to take to his bed on account of the burns on his feet. At that time he discovered he had a severe burn on the bottom of each of his heels about the size of a dollar which forced him to stay at home for nearly two weeks. The boy was also burned on his hands and feet and it must have been a month before he was able to be around. The older man was burned very severely on both his hands and feet, besides a nasty burn on his side. For a week or two he was unable to keep anything on his stomach. I do not know whether this was due to the burn on his side or his general condition. Neither he nor his son came to town to receive the assistance of a physician in spite of the fact that they had been told to do so, but remained at home and received such care and attention as the wife and mother was able to give them with the simple remedies which she had. Later, the engineer, whose brother was a doctor in Tonopah, sent them some medicine. The boy and the engineer have apparently entirely recovered from their burns, but the older man is crippled in the hands from contraction of the tendons, and it is my opinion that he will always be so. I am not sure whether or not the burns are entirely healed, but it is my impression that they are not, particularly on the feet.

Evidently at the time of the accident there was some perspiration on the hands and wrists of the older man as his wrists looked as though they had been subjected to a hot flame. Evidently there must have been an arc which was more intense where there was moisture on the skin. It is my opinion that these people were not very severely shocked but that the high voltage caused the current to pass over their bodies to ground instead of through their tissues and nervous system. This, I believe, is the general theory regarding high voltage; that is, it burns instead of producing a shock.

Another experience that came to my attention during the past winter was at a pumping station here in Goldfield where one of the Water Company's men, while working at the well, carelessly brought an iron pipe in contact with the 6600-volt circuit. Unlike the high tension power line this circuit is not supposed to be grounded, yet when this man brought the pipe which he was carrying in contact with one of the 6600-volt lines he was instantly killed. There was scarcely a mark to be found on his body in the shape of a burn. My idea of this casualty was that the man was shocked to death. In all probability the heart was paralyzed, so that lower voltages ranging up from 1100 up to 6600 volts apparently affect the nervous system in such a manner that death usually follows, but with the higher voltages those coming in contact with the line are severely burned but not so severely shocked.

The other day at our substation one of our attendants carelessly raised up while he was working and came in contact with the 6600-volt circuit on the fleshy part of his hip. He did not lose consciousness or even lose his head but realized what he had done. The shock caused the muscles of his legs to contract suddenly which brought him down on his haunches and thus broke the arc; not, however, until a blister had been made on the skin.

of his hip and on the sole of his foot the size of a twenty-five cent piece. I took the man to the doctor where his burns were dressed and in a day or two he had entirely recovered and felt no serious effects whatever.

sinusitis treated by Krause operation and alcohol injections.

A lively discussion of these cases followed in which Drs. Graham, Wintermute, McNaught, Horn, Nagel, Welty, Lucchetti and Fredericks participated.

It was voted to continue these clinical meetings in the future.

## SOCIETY REPORT

### PROCEEDINGS OF THE SAN FRANCISCO COUNTY MEDICAL SOCIETY.

During the month of May the following meetings were held:

#### Section on Medicine, Tuesday, May 6, 1913.

1. Review of Blood Findings which may assist in the Diagnosis of Carcinoma. Donald Currie. Discussed by H. D'A. Power and J. Rosenstirn.
2. Report of Case of Bilateral Hematuria Treated by Subcutaneous Injection of Blood. L. W. Allen. Discussed by M. Krotoszyner, R. L. Rigdon, M. Silverberg, J. Rosenstirn, W. B. Stevens, J. J. Hogan and Cullen Welty.
3. Report of Case of Hemorrhage in New Born Treated by Subcutaneous Injection of Blood. T. D. Maher. Discussed by H. R. Oliver and H. J. Kreutzmann.

#### General Meeting, Tuesday, May 13, 1913.

1. Demonstration of Moving Pictures. Dudley Tait. (a) Technic of Vessel Anastomosis; (b) Transfusion; (c) Visceral Organisms.
2. Colds in their Relation to the Physics of the Atmosphere. C. M. Richter. Discussed by A. McAdie, K. Pischel and J. J. Kingwell.

#### Section on Surgery, Tuesday, May 20, 1913.

1. Presentation of Case of Raynaud's Disease. C. G. Levison.
2. Diagnosis and Treatment of Urethral Calculus, with Report of Unusual Case. W. E. Stevens. Discussed by A. B. Grosse, and M. Krotoszyner.
3. Theory and Practice of Artificial Transfusion. J. J. Hogan. Report of two cases. B. F. Alden. Discussed by J. Eaves, J. Rosenstirn, S. T. Pope, S. C. Keck and M. Krotoszyner.
4. X-Ray Demonstration. L. P. Howe. Section on Eye, Ear, Nose and Throat.

#### Tuesday, May 27, 1913.

This meeting, which was called to order at 4:30 p. m., Dr. Horn presiding, was a clinical one, as proposed at the previous meeting of this section, and was an innovation which proved to be very successful. The program follows:

Dr. Horn presented:

- (a) Fibro-sarcoma of the nasal pharynx in an adult.
- (b) A case of anthrax and lues of the nose.
- (c) A case of ulcer of the posterior pillar of the palate.

Dr. C. S. G. Nagel:

- (a) A case of essential shrinkage of the conjunctiva.
- (b) A young girl with acquired conical corneae.

Dr. McNaught:

- (a) Adult with a pan-sinusitis treated with alcohol injections and healed radical mastoid in six weeks.

Dr. V. F. Lucchetti:

- (a) Case of pseudo glioma of the left eye in a child of three years.
- (b) Adult with traumatic rupture of the sclera following a blow with a brass knuckle.
- (c) Case of fibro-lymph adenoma of the nasal pharynx.

Dr. G. P. Wintermute presented a case of pan-

### SAN JOAQUIN COUNTY.

The regular monthly meeting of the San Joaquin County Medical Society was held at the office of Dr. G. W. Walker on Friday evening, May 30. The following members were present: Drs. H. E. Sanderson, D. R. Powell, Mary Taylor, Minerva Goodman, Fred P. Clark, Barton J. Powell, C. F. English, J. D. Dameron, L. Dozier, G. W. Walker, Margaret H. Smyth and B. F. Walker, with Dr. J. W. Hammond of Byron as guest.

Dr. Barton J. Powell, chairman of the Committee on Medical Legislation, read the resolutions which the committee had drafted concerning same.

The business of the meeting having been concluded, the society listened to a paper on "Deformities of Septum and Face from Hypertrophies of the Lymphoid Ring" by Dr. G. W. Walker. It proved to be a very interesting and instructive paper, and the discussion which followed, while participated in chiefly by the specialists, was interesting to all.

The other paper of the evening was read by Dr. Minerva Goodman and gave a synopsis of her work as medical inspector in the public schools during the past year. The report showed that a large percentage of school children were suffering from defects of hearing and vision, affections of the heart and lungs and nervous disorders. One hundred and two children were operated on for adenoids and tonsils at the free clinic. Only 31 per cent. of the school children were found to be vaccinated.

The excellent work of Dr. Goodman was highly recommended by the members present, and on a motion by Dr. Taylor seconded by Dr. Powell, a resolution was passed by the Society endorsing the work done by Dr. Goodman, as medical inspector, and recommending a continuance of the work of medical inspection in the schools; a copy of this endorsement to be sent to the Board of School Directors. There being no further business, the meeting adjourned.

A special meeting of the San Joaquin County Medical Society was held June 6th at the office of Dr. W. J. Young for the purpose of making arrangements for the funeral of our late member, Dr. Ira B. Ladd. The members present were: Drs. F. P. Clark, C. F. English, B. J. Powell, D. R. Powell, L. Dozier, D. F. Ray, W. W. Fitzgerald, W. J. Young and R. T. McGurk.

After hearing the history of the illness that led to Dr. Ladd's death from Dr. Fitzgerald, the matter of resolutions was taken up, and on the motion of Dr. B. J. Powell, that a committee of three pointed Drs. D. F. Ray, L. R. Johnson and R. T. McGurk. The secretary was instructed to send a Gurk. The secretary was instructed to send a copy of these resolutions to the family of Dr. Ladd and to put a copy in the minutes.

R. T. McGurk, Secretary.

### SANTA BARBARA COUNTY MEDICAL SOCIETY.

The Santa Barbara County Medical Society met in regular session at the Arlington Hotel on Monday, May 19, 1913, and was called to order by the Vice-President, Dr. Samuel P. Low. Present—Drs. Anderson, Barry, Brown, Low, C. S. Stoddard, Wells; a total of six members; necessary for